

With beach preservation project, Duxbury hopes plovers get comfy

By Alexander Reid
GLOBE STAFF

DUXBURY — A sand dune runs the length of the town beach. Beach grass and snow fencing fortify this dune, stabilizing it against coastal storms and erosion.

But the fences and grass plants are intrusions into the habitat favored by the piping plovers, an endangered shorebird that loves barrier beaches, like Duxbury's. These tiny

birds prefer undisturbed, flat expanses of gravel-sprinkled sand.

For years, Duxbury has struggled with two priorities — preserving its beach while cultivating a habitat for piping plovers.

The town has staunchly supported efforts to increase plover populations along the Massachusetts coast. But Duxbury also cherishes its 4-mile beach and has worked to effect a recovery from the two great storms that hammered its oceanfront in October

1991 and December 1992.

Conservationists are now exploring a way to pursue both agendas, in hopes of striking a balance between beach preservation and increasing plover habitat.

Today, south of an area on the beach called High Pines, between the Powder Point Bridge and Gurnet and Saquish in Plymouth, tons of sand have been trucked in and spread across a little more than a half-acre section of grass-covered beach.

The area is flat and clear of beach grass and fencing, considered to be perfect nesting territory for plovers and least terns, another endangered migratory coastal bird.

Scott Hecker, director of the coastal waterbirds program for the Massachusetts Audubon Society, said plovers and terns thrive on remote, undisturbed beaches.

"The absolute best habitat is that which you'd find after a major storm, something on

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GLOBE FILE PHOTO / MARK WILSON

A female piping plover preparing to settle over her four eggs in their sand nest.

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the caliber of a hurricane or a nor'easter," said Hecker, who has guided Audubon's waterbird program since its beginning in 1987. "That's when their natural habitat is created - bare sand and gravel, no dunes, a pretty flat surface," explained Hecker.

Critical support for the project has come from the Duxbury Beach Reservation, the private group that owns the beach and leases it to the town. For a number of years, the trustees have played a major role in plover protection on the beach.

Duxbury's harbor master's office hires up to 14 plover monitors who work along with Ryan Chandler, the town's endangered species officer. A \$25,000 grant from the reservation trustees helps pay for the effort.

Al Vautrinot, a reservation trustee, said the group also appropriated \$10,000 for the sand experiment and will consider spending more for the project next year if it succeeds.

"We haven't had any major storms in years," said Vautrinot. "The beach is recovered and it's very stable. We're at the point where we can think about providing additional habitat for piping plovers," he said.

The area has been covered by a 12-inch-thick layer of sand trucked in from a Plymouth quarry and mixed with a smaller amount from another beach. Those involved with the project say the area is remote and seldom used by bathers or off-road-vehicle drivers.

"We like it, it looks natural," said Vautrinot. "The question is, will the plovers like it. We won't know until they get here and choose where they're going to build their nests. It's up to them," he said.

Vautrinot and others will not have to wait long. Plovers have been returning to coastal environs such as Duxbury Beach for the past two weeks from their winter home in the Caribbean. They've also been sighted in other traditional local nesting areas, on Third and Fourth Cliffs in Scituate and Plymouth Beach in Plymouth.

The courtship, nesting, and egg-hatching cycle for plovers lasts into August, bringing the birds into competition with people for space on the beach during the summer, which has led to some bitter conflict.

The diminutive, sand-colored birds now are scouting beach areas for nesting places. The first eggs will be laid this week in nests that are

little more than slight depressions in the sand, according to Hecker. Egg-laying will continue into late May.

The eggs take about 27 days to hatch. Plovers are territorial and need about 50 feet of space between nests, where they lay between one and three eggs. Bird conservationists estimate that the man-made habitat could accommodate at least two plover nests.

Conservationists are also hoping that the area draws least terns, a species that prefers the same nesting habitat as the plover.

Hecker said the area has enough space for a least tern colony of up to 50 pairs. "The terns aren't nearly as territorial as plovers," said Hecker.

Duxbury's project reflects the growing research on coastal birds

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and how their habitat is affected by man-made disturbances.

Scott Melvin, a zoologist with the state Division of Fisheries and Wildlife, said Duxbury's successful recovery from the storms of the 1990s came at the expense of the plover and tern habitat.

"These were all well-intentioned efforts to repair and stabilize the beach," said Melvin, describing the construction of the dune and the beach grass planting that followed the 1992 storm.

"Over the last seven or eight years we've seen that the plovers and the terns avoided the dune and shied away from areas where there were concentrations of beach grass," said Melvin.

The focus has caused preservationists to rethink their approaches to beach protection, including the planting of beach grass, which helps

stabilize dunes by collecting and holding sand in place.

Joe Grady, the town's conservation agent, said the town is applying new guidelines on the amount of grass that groups such as the Duxbury Beach Preservation Society are allowed to plant.

"We all thought it was a good thing, planting grass to help keep the dune from washing away," said Grady, who issues permits for grass planting. He said grass stems are planted 3 feet apart, which is double the planting distance two years ago.

The hope of these new approaches, said Grady and others, is that conservationists will be able to maintain beach stability while also promoting plover habitat.

"What we want to do now is establish a balance," said Grady. "We think we can accomplish both goals, the beach and the birds at the same time."

The experiment could help defuse another tension that arises during plover season when conservationists and off-road-vehicle users clash over beach access when areas are cordoned off to protect plover nests.

Plover chicks emerge from their nest by mid-June and begin foraging for food until they grow strong enough to fledge, or fly away from their nests, which can take up to 35 days after they hatch, according to biologists.

In the meantime, they scurry around on the beach, camouflaged by their size and color so that they blend into the surroundings and are easily run over by motorists and pedestrians.

To protect them, conservationists post the monitors to guard the nesting area from disturbances. Fences are also erected to keep dogs, foxes, and other predators away.

"At this point we'll wait and see what happens when the birds show up," said Hecker, adding that Audubon has launched an urgent campaign to find temporary housing in Duxbury for this year's crop of beach monitors, who will spend their days guarding the bird nests.

Duxbury Beach is a productive plover nesting area. Last year, 14 pairs of plovers nested on the beach. Plymouth recorded 20 nesting pairs, and Scituate had three.

Hecker said he and others would consider expanding the project next year, covering a larger area, if this year's experiment succeeds. "If this works, we may have a new way to help the plovers," said Hecker.



A least tern chick standing in the hands of a biologist.

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